

Chapter 1: About the 5250 gateway

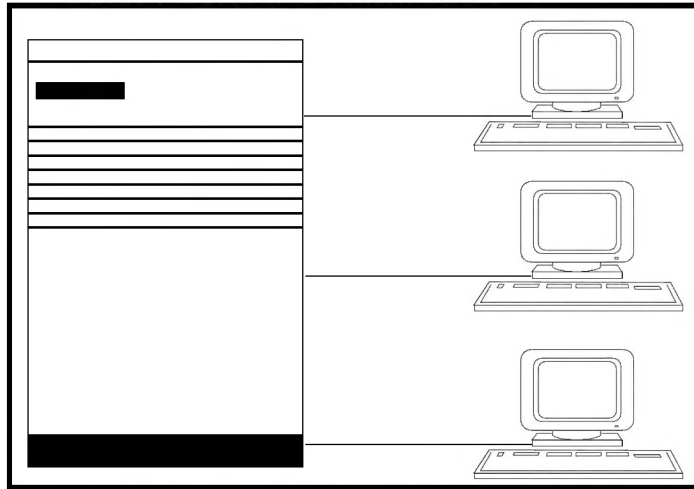
This chapter introduces you to the Northern Telecom (Nortel) 5250 Gateway and provides:

- background on the 5250 communication protocol
- descriptions of the 5250 Gateway hardware and software
- a description of how Meridian IVR 2.0/I interfaces with a host computer
- a brief explanation of terms used in this guide

The 5250 communication protocol

The 5250 communication protocol has its origin in the Systems Network Architecture developed by IBM. These terminals gives multiple users access to resources residing on a host computer.

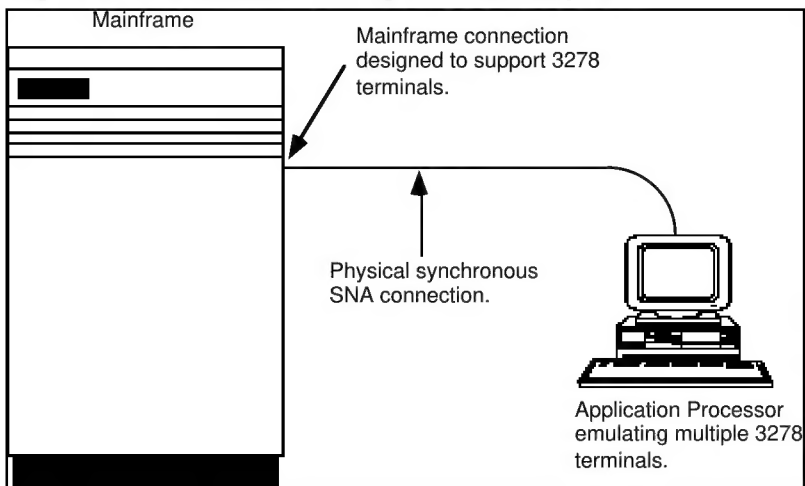
Figure 1-1
Terminals connected to a mainframe



The 5250 terminal uses a specific protocol for displaying information on its screen and returning screen contents to the host. This protocol is based on each field on an input screen having unique attribute information. These attributes identify the characteristics of the information written to the screen (e.g., highlighted, reverse video, writable). When a user enters information, field attributes are modified. This protocol became a standard for information transfer and presentation across the IBM product line.

The 5250 communication adapter uses the same technology. One 5250 adapter installed in an application processor can emulate up to 64 concurrent 5250 terminal sessions over a single synchronous connection. By complying with the 5250 communication protocol, Meridian IVR 2.0/I applications can support multiple logical 5250 terminal sessions. No physical terminals are required. Your Meridian IVR 2.0/I applications can access the same host resources as operators sitting at 5250 terminals.

Figure 1-2
Logical terminal sessions running on a host computer



Consider a menu-driven program on a host. This program allows an operator to enter and retrieve account information stored in a database. Instead of connecting a 5250 terminal to the host and retrieving information manually, you could write a Meridian IVR 2.0/I application that logs on to the host, manipulates the host application, then stores the desired information in the Meridian IVR 2.0/I application's buffers. These buffers can then be played to a caller.

Taken a step further, your application could simultaneously run multiple terminal sessions, processing different transactions for different callers.

The 5250 gateway hardware and software

You can install the 5250 Gateway on application processors with the following operating systems:

- SCO Open Desktop

The application processor must have

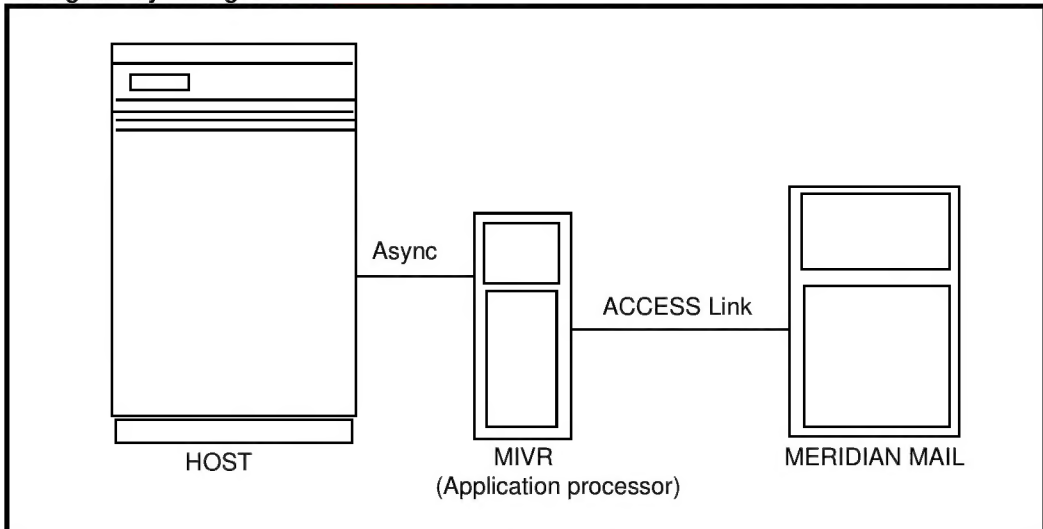
- a synchronous SNA protocol connection to one or more host computers

The 5250 Gateway consists of

- the Terminal Resource Server (TRS)
- the Terminal Resource Server Client (TRSC)
- vendor communication software and hardware

Figure 1-3 shows the typical hardware configuration for the 5250 gateway.

Figure 1-3
5250 gateway configuration



TRS

The Terminal Resource Server (TRS) controls all host communication sessions. TRS controls all installed terminal emulation packages and manages all host connections. TRS runs as a stand-alone process within the Meridian IVR 2.0/I architecture, and starts automatically at Meridian IVR 2.0/I startup.

TRS passes information between Meridian IVR 2.0/I and the TRS Client (TRSC). It acts as a translator between Meridian IVR 2.0/I and the Host.

To use TRS, place a COMI cell in the Meridian IVR 2.0/I call flow at the point where you need to establish a host connection. The COMI cell sends requests for information to the TRS process, which then passes the requests on to the host. A COMO cell retrieves the information sent to TRS by the host, and then ends the transaction. A COMA cell aborts the host transaction in the case of a hang-up or an error. For information on using Meridian IVR 2.0/I cells, see the Application Development Guide and the Meridian IVR 2.0/I Cell Catalog.

TRSC

The Terminal Resource Server Client (TRSC) communicates with the specific vendor communication package. It takes data from TRS and formats it for use by the different vendor hardware and software. There is a different TRSC for every different host connectivity package.

Vendor communication software and hardware

The vendor communication software and hardware manage the actual host connection. They are responsible for transmitting and receiving data complying with the SNA network protocol.

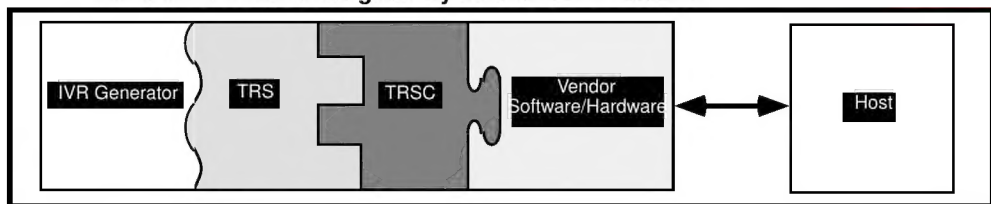
Apertus

Apertus provides a multiprotocol adapter board, an expander box, and an application called Express.

Each component of the host connectivity process is a self contained process, but they all work together in the architecture shown in [Figure 1-4](#).

Figure 1-4

Meridian IVR 2.0/I 5250 gateway software architecture



TRS configurations

TRS runs on a fully-integrated node, where you install the 5250 hardware and software on the application processor.

Integrated TRS configuration

The simplest 5250 configuration is a single, fully-integrated node consisting of an application processor. The 5250 hardware and software is installed as part of the MIT. TRS is installed during installation of Meridian IVR 2.0/I. This puts all the communication tools in one centralized location, simplifying the host connectivity procedure.

In an integrated environment, you store TRS and its associated files on the application processor in the /u/ivr/3270 directory.

Note: The etc/services file residing on the client application processor and the TRS server must include the following directive:

```
trs 1001/tcp
```

Once this configuration has been properly set up, the client application processor can access the TRS server system's 5250 Gateway resources to communicate with the host computer.